

PLOTNIKOV, V.G.; DANILOVA, V.I.; SHIGORIN, D.N.; TERPUGOVA, A.F.;
ZUBKOVA, L.B.; FILIPPOVA, L.G.

Theoretical study of the spectral behavior of systems with
a quasi-aromatic cycle. Zhur. fiz. khim. 39 no.9:2311-2312
S '65. (MIRA 18:10)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya
AN SSSR.

L 46564-66

ACC NR: AR6016187

SOURCE CODE: UR/0058/65/000/011/1021/1021

AUTHOR: Danilova, V. I.; Ryzhova, G. L.; Morozova, Yu. P.; Terpugova, A. P.

TITLE: Investigation of long wave absorption bands of certain polysubstituted aromatic nitrocompounds

SOURCE: Ref. zh. Fizika, Abs. 11D153

REF SOURC: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 345-349

TOPIC TAGS: absorption band, aromatic nitro compound, organic solvent, BENZENE

ABSTRACT: The authors investigated the electron structures of absorption of certain polysubstitutes of benzene (para-nitrophenol, 2,4-, 2,5-, and 2,6-dinitrophenols, picric acid, para-nitrosophenol, and 2,4-dinitroaniline) for the purpose of determining the role of the NO₂ group in the origin of long-wave absorption bands. The energy levels of the 2,4- and 2,6-dinitrophenols are calculated by the free-electron method. It is shown that the hydrogen bond between the molecules of the investigated compounds and the molecules of the hydroxyl-containing solvents may lead to the occurrence of a new absorption band, which is missing from non-polar and oxygen-containing solvents. [Translation of abstract]

SUB CODE: 07

Card 1/1

JS

L 32070-66 EWT(m)/EWP(j) RM

ACC NR: AR6016174

SOURCE CODE: UR/0059/65/000/011/1017/000

AUTHOR: Potapochkina, L. M.; Terpugova, A. F.; Zubkova, L. B.

TITLE: Investigation of singlet and triplet levels of anthraquinone and its derivatives

SOURCE: Ref. zh. Fizika, Abs. 11D88

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 336-344

TOPIC TAGS: molecular orbital, molecular spectrum, nonmetallic organic derivative, luminescence quenching, hydrogen bonding, oxygen

ABSTRACT: Two methods (MO LCAO and MOSE) are used to calculate the energy spectrum and the wave functions of anthraquinone and some of its α - and β -derivatives. The α -derivatives of anthraquinone were calculated with and without allowance of the intramolecular H bond. Data are obtained on the influence of the structure and composition of the molecule, and also on the effect of the electron-donor properties of the substitute on the position of the singlet and triplet levels, making it possible to explain the experimental results of A. V. Karyakin, who investigated the fluorescence quenching of these compounds by oxygen [Translation of abstract]

SUB CODE: 20, 07

Card

1/1

USSR/Cultivated Plants - Grains

M-4

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1481

Author : M. P. Taimigova

Inst : All-Union Agricultural Academy

Title : The Morphological and Anatomical Characteristics of a Summer Durum Wheat Hybrid Produced by the VSKhI [All-Union Agricultural Institute], Department of Selection and Seed Culture.

Orig Pub : Zap. Voronezhsk. s. kh. ir-ta, 1956, 26, No 2, 110-118

Abstract : There is a presentation of the results of an analysis of the hybrid, obtained by grafting "Melyanopus 69" wheat on the Persian wheat, which is distinguished by its vigor of development, fast ripening and hielding capacity. The peculiarities of the root development leaf system and stems have been studied. According to a number of characteristics the hybrid surpasses the original varieties of wheat, according to others, it takes an intermediate position or approaches the parental forms.

Card : 1/1

Terpugova, M.P.
FISHER, L.B.; TERPUGOVA, M.P.; KOTLYAREVSKIY, I.L.

Catalytic dehydrogenation of 2,3-dimethylbutane. Izv. vost. fil.
AN SSSR no.9:53-56 '57. (MIRA 11:1)

1. Vostochno-Sibirskiy filial AN SSSR.
(Butane) (Dehydrogenation)

FISHER, L.B.; TERPUGOVA, M.P.; KOTLYAREVSKIY, I.L.

Dehydrogenation of butane di-derivatives; studying the first
stage of 2,3-dimethylbutane dehydrogenation. Izv.Sib.otd. AN
SSSR no.9:32-38 '58. (MIRA 11:11)

1. Vostochno-Sibirskiy filial Akademii nauk SSSR.
(Butane) (Dehydrogenation)

5(1,3)

SOV/153-2-4-26/32

AUTHORS: Kotlyarevskiy, I. L., Fisher, L. B., Zanina, A. S., Terpugova, M. P., Volkov, A. N., Shvartsberg, M. S.

TITLE: Synthesis of Several Monomers on Alumochromium Catalysts

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 4, pp 608 - 613 (USSR)

ABSTRACT: A report on this paper was given at the All-Union Conference on "Ways of Synthesis of Initial Products for the Production of High Polymers" which took place in Yaroslavl' from September 29 to October 2, 1958. The results of the catalytic synthesis of 2,3-dimethyl-butadiene-1,3 as well as of monomers of the type of p-xylene from acetylene derivatives are given. The substance mentioned at first can be used in the production of special rubber types (Ref 1). It could not be obtained by the production methods so far used. The diagram (see Diagram) being worked at by the authors consists of two stages. The first one (Ref 2) yielded not more than 15% of the end product. In spite of numerous patents (Ref 3), a thorough description of reaction conditions is still missing. Therefore, the authors determined the optimum conditions of isobutane alkylation with ethylene

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Synthesis of Several Monomers on Alumochromium Catalysts SOV/153-2-4-26/32

in the presence of aluminum chloride. Under these conditions (48 - 51°, 7 - 9 atm, 1.5 kg isobutane, 145 g ethylene, 40 g C_2H_5Cl , 5 g $AlCl_3$, 2 hours) the yield of 2,3-dimethyl-butane rises to 47%. The reaction is very sensitive to temperature (only 1/3 of the alkylate yield at 35°). The catalyst can be used 5 to 6 times without reducing the quantity of alkylate or of 2,3-dimethyl-butane. Ethylene has to be added during the whole process; its partial pressure must not exceed 0.5 - 0.7 atm, or otherwise the 2,3-dimethyl-butane content in the alkylate decreases rapidly. The addition of 1-3% C_2H_5Cl accelerates the process. Isobutane alkylation with ethylene at a high temperature proceeds at a pressure of 100 - 200 atm according to a radical mechanism, and is accelerated by radical donors. It was carried out by the authors in the presence of C_2H_5Cl (for the first time) in a special, continuously working plant. The alkylate yield (computed for ethylene) reached 17-18% under optimum conditions (450°, 200 atm, reaction time 25 minutes, weight ratio isobutane : ethylene = 10 : 1, initiator quantity 2.5%). 2,2-Dimethyl-butane (32-35% of the alkylate) was the

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Synthesis of Several Monomers on Alumochromium Catalysts SOV/153-2-4-26/32

main product; 2,3-dimethyl-butane amounted to 8-10% of the alkylate. The preparation of 2,3-dimethyl-butadiene-1,3 from 2,3-dimethyl-butane proceeds in two stages: a) Dehydration with the formation of two olefines: 1) tetramethyl-ethylene, and 2) 2,3-dimethyl-butene-1. b) Dehydration of the olefines to the end product. This reaction has not been considered in publications (except for the reference in the patent (Ref 5)). The authors investigated the first stage thoroughly on an alumochromium-potassium catalyst. The specifications for its production were provided by M. N. Marushkin (deceased) (IOKh AN SSSR - Institute of Organic Chemistry AS USSR). This catalyst showed the highest activity at 550°. The catalyzate reached a 87% yield with a content of unsaturated hydrocarbons of 60-67%. The investigation of the second stage has not yet been completed. An aromatization diagram of divinyl-acetylene-hydrocarbons is given. Several mono-, bi-, and tricyclic hydrocarbons with a prescribed structure were produced on the basis of the diagram. A diagram of the reactions of the synthesis of p-xylene from acetylene and acetone is suggested. Since there is no demand for acetone in the USA because of increasing phenol production,

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Synthesis of Several Monomers on Alumochromium Catalysts SOV/153-2-4-26/32

and its price according to the Sergeyev method is already $1/3 - 1/4$ of the present one, the synthesis method mentioned above might become useful for industry. In conclusion, a simple way of synthesis for polyphenyl systems is suggested. Moreover, the Favorskiy reaction is mentioned in the paper. There are 11 references, 5 of which are Soviet.

ASSOCIATION: Vostochno-Sibirskiy filial SO AN SSSR (East Siberian Branch of the Siberian Department of the Academy of Sciences, USSR)

Card 4/4

FISHER, L.B. ; TERPUGOVA, M.P.; KOTLYAREVSKIY, I.L.

Dehydrogenation of disubstituted butanes. Dehydrogenation of
2,3-dimethylbutane and 2,3-dimethylbutenes in the presence of
diluenta. Izv.Sib.otd.AN SSSR no.2:57-60 '61. (MIRA 14:3)

1. Vostochno-Sibirskiy filial Sibirskogo otdeleniya AN SSSR,
Irkutsk.

(Butane) (Butene) (Dehydrogenation)

KALABINA, A.V.; TYUKAVKINA, N.A.; TERPUGOVA, M.P.

Synthesis and some properties of α , β -dichloroethyl ethers of the aromatic series. Izv.vys.ucheb.zav., khim. i khim. tekhn. 4 no.4:632-635 '61. (MIRA 15:1)

1. Irkutskiy gosudarstvennyy universitet imeni Zhdanova, kafedra vysokomolekulyarnykh soyedineniy i organicheskogo sinteza.
(Ethers)

KOTLYAEVSKIY, I.L.; TERPUGOVA, M.P.; ANDRIYEVSKAYA, E.K.

Highly unsaturated polymers. Report No.10: Polymers having azo groups in the chain. Izv. AN SSSR. Ser. khim. no.10:1854-1860 0 '64. (MIRA 17:12)

1. Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya AN SSSR.

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755420012-4

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755420012-4"

... was a brown substance which does not melt up to 3000. The

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CIA-RDP86-00513R001755420012-4"

KOTLYAREVSKIY, I.I.; TIRFUGOVA, M.P.; MITUSHOVA, A.A.

Synthesis of diphenylpicrylhydrazyl. Izv. SO AN SSSR no. 2 Ser.
khim. nauk no. 1:151-152 '65. (MIRA 18:8)

1. Institut khimicheskoy kinetiki i goreniya Sibirskogo
otdeleniya AN SSSR, Novosibirsk.

L 23866-66 EWT(m)/EMP(j)/T IJP(c) WH/RM 48
ACC NR: AP6014409 SOURCE CODE: UR/0062/66/000/004/0713/0720 45
B

AUTHOR: Terpugova, M. P.; Kotlyarevskiy, I. L.; Andriyevskaya, E. K.

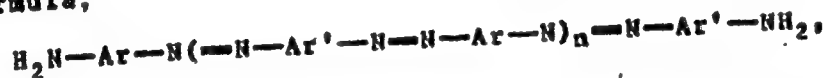
ORG: Institute of Chemical Kinetics and Combustion, Siberian Department of the Academy of Sciences SSSR (Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya Akademii nauk SSSR)

TITLE: Highly unsaturated polymers. Communication 15. Synthesis and some physical properties of polyazopolyarenes

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1966, 713-720

TOPIC TAGS: organic semiconductor, semiconducting polymer, polyazopolyarene, oxidative polycondensation, electric property

ABSTRACT: New homo- and co-polymeric polyazopolyarenes have been prepared and their physical and electrical properties investigated. This work was part of a systematic study of the effect of the structure of highly unsaturated polymers on their properties. The polymers had the general formula,



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L 23866-66

ACC NR: AP6014409

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where Ar and Ar' may be identical or different. The homo- and co-polymers (listed in the source) were prepared by oxidative polycondensation of aromatic diamines in pyridine solution in the presence of CuCl. The diamines used were o-tolidine, bis(p-aminophenyl)methane, and 4,4'-diaminostilbene. In addition, o-phenylenediamine was used, which should not form straight-chain polymers, and (p-aminophenyl)acetylene, which should form polymers containing both azo and butadiyne groups in the backbone. Butadiyne groups should form cross-links on heating, thereby improving electrical conductivity. These diamines and (p-aminophenyl)acetylene were homopolymerized and copolymerized with each other and with p-phenylenediamine, benzidine, and chrysoidine. The polymer structures were confirmed by elemental analysis and IR spectroscopy, and showed an EPR signal. Elemental analysis and IR spectra revealed partial oxidation to form $=N+O$ bonds. Branched homo- and co-polymers were fusible and more soluble in chloroform, tetrahydrofuran, acetone, and dioxane than the infusible [straight-chain] polymers. The room temperature conductivity of all the polymers was low, 10^{-13} to 10^{-14} mho/cm, but rose rapidly with temperature, reaching 10^{-8} to 10^{-7} mho/cm for some of the polymers at 200–250°C. Some of the polymers exhibited a very high activation energy for conduction, 2–3.5 eV. Orig. art. has: 3 tables and 1 figure. [SM]

SUB CODE: 07, 11/ SUDM DATE: 18Nov63/ ORIG REF: 002/ OTH REF: 004
ATD PRESS: 4246
Card 2/2

L 5418-66 E&T(1)/T LJP(c)

ACC NR: AP5025086

SOURCE CODE: UR/0368/65/003/003/0209/0216

AUTHORS: Preobrazhenskiy, N. G.; Ravodina, O. V.; Terpugova, N. S.

ORG: none

TITLE: Formation of spectral line shape with asymmetrical self-reversal

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 3, 1965, 209-216

TOPIC TAGS: spectrometry, line self reverse, spectral line intensity, spectrum line, spectrum analysis

ABSTRACT: The present paper is a continuation of work reported previously by N. S. Gorbacheva and N. G. Preobrazhenskiy (Opt. i spektr., 15, 453, 1963). The factors determining the spectral line shape with asymmetrical self-reversal were investigated. It was found that the line shape could be described in terms of four parameters ϕ_1 , ϕ_2 , ϕ_3 , and ϕ_4 (see Fig. 1). The relationships between these parameters and the optical density and inhomogeneity of the radiating layer, the Voigt parameter, and the shifts and half-widths of emission and absorption lines

Card 1/2

UDC: 543.42

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L 5418-66

ACC NR: AP5025086

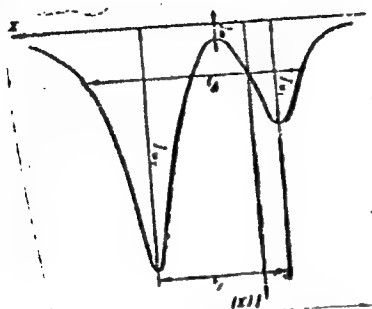


Fig. 1
Parameters in terms of which
the line shape $I(x)$ is described.
 $\phi_1 = I_{M1}/I_{M2}$, $\phi_2 = I_m/I_{M2}$, ϕ_3
line width measured at half-line
width of the smaller maximum,
 ϕ_4 the distance between maxima

were determined. The results are given in tabular form. Orig. art. has: 9
tables, 1 graph, and 13 equations.

SUB CODE: OP/

SUBM DATE: 12Jan65/

ORIG REF: 005/

OTH REF: 005

BVK

Card 2/2

ACC NR: AP7003146

SOURCE CODE: UR/0368/66/005/006/0706/0711

AUTHOR: Preobrazhenskiy, N. G.; Kolobova, G. A.; Terpugova, N. S.

ORG: none

TITLE: Theory of quantitative spectrum analysis with a laser excitation source

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 6, 1966, 706-711

TOPIC TAGS: laser application, spectrum analysis, quantitative analysis, optic density, laser spectroscopy

ABSTRACT: The extensive inhomogeneity and considerable optical density characteristic of the luminous layer produced by using a laser to heat a specimen make conventional methods for recording the integral line intensity unsuitable. The spectral region separating the self-reversed maxima is preferable as a measure of the concentration of the element in question. The paper contains a theoretical study of the dependence of the above spectral region on the optical thickness of the emitting layer under various conditions of spectrum excitation. Orig. art. has: 19 formulas and 2 figures. [Authors' abstract] [AM]

SUB CODE: 20/SUBM DATE: 26Jul65/ORIG REF: 007/OTH REF: 006/

UDC: 543.42

Card 1/1

TERRY, C.A. ; TINSLEY, A. B.; ZARKOVIC, Stjepan (translator)

Arc welding of low-alloy steel plates with the application of powder
on the front and back sides of the weld. Zavarivanje 3 no. 7/8:143-149
S-0 '60.

KASUMZADE, N.G.; TER-SAAKOV, B.U.; MAMEDOV, M.A.; ARAKELOV, A.S.;
SPEKTOR, Sh.Sh.; NEGREYEV, V.F., red.; ZEYNALOVA, T.Z.,
red. izd-va; AKHMEDOV, S., tekhn. red.

[Protection of apparatus and equipment of petroleum re-
fineries from corrosion] Zashchita apparatury i oborudovaniia
neftepererabatyvaiushchikh zavodov ot korrozii. [By] N.G.
Kasumzade i dr. Baku, Azerneshr. 1962. 282 p. (MIRA15:9)
(Petroleum refineries--Equipment and supplies)
(Corrosion and anticorrosives)

ARUTYUNYAN, F.R.; DAYON, M.I.; TER-SAAKYAN, A.A.

Determining the mass of charged particles by their scattering and
residual run in multiplate Wilson cloud chambers. Izv. AN Arm. SSR.
fiz.-mat. nauk 11 no.2:71-77 '58. (MIRA 11:6)
(Cloud chambers) (Particles, Elementary)

BC TER-SAKYAN, T.S.

Breaking down in recently harvested potato tubers. T. S. Ter-Sakyan (Compt. rend. Acad. Sci. U.R.S.S., 1961, 21, 166-167). In regions with a long period between successive frosts, two high yields of potatoes are obtained in a year if the tubers which are harvested first are sown before the second planting. Ripe and good-size tubers (40-60 g.) are put into a trench (1 m. wide, 10-15 cm. deep, and 2-3 m. long) previously mulched with 10-15 cm. of straw 3 cm. thick and then covered with a layer of earth 10-12 cm. deep. The earth is rammed down with a layer of earth 10-12 cm. deep. The tubers are sown in the trench in quantity 30-50 during July, and sprouting usually occurs after 14 days. The sprouted tubers are then planted in moist soil. J. N. A.

1. ~~REZAKYAN~~, Tiran S.

Mbr., Inst. Farm Studies, Dept. Agric. Sci., Armenian Acad. Sci., 1943-47.
Cand. Agricultura Sci.

"Two Potato Harvests from the Same Tubers," Dok. AN, 41, No. 1, 1949.

AGADZHANYAN, G.Kh.; TER-SAKYAN, T.S.

Effect of the planting depth of potato tubers on growth and development indexes. Izv.AN Arm.SSR,Biol.i sel'khoz.nauki. 5 no.11:87-92
'52. (MLRA 9:8)

(Armenia--Potatoes)

AGADZHANYAN, G.Kh.; TER-SAAKYAN, T.S.

Effect of planting time on the yield and quality of the potato crop
[in Armenian with summary in Russian]. Izv.AN Arm.SSR,Biol.1
sel'khoz.nauki 7 no.3:25-36 Mr '54. (MLRA 9:8)
(Shiraki Steppe--Potatoes)

LOCALITY : USSR
CATEGORY :

ABS. JOUR. : RZBiol., No. 1959, No. 10313

AUTHOR : Ter-Sakyan, T.

TITLE : Stem Borerworm of the Potato and New Method of
Controlling It

ORIG. PUB. : Ayastani kolntesakan, Kolxhoznik Armenii,
1958, No 4, 49-50

ABSTRACT : No abstract.

CARD: 1/1

TER - SAAKYAN, T.S.

AGADZHANYAN, G.Kh.; TER-SAAKYAN, T.S.

Certain biological features of Kalitinets and Lorch potatoes
grown under different spacing conditions in the Leninakan
Plateau [in Armenian with summary in Russian]. Izv. AN Arm.
SSR. Biol. i sel'khoz. nauki 11 no.4:65-74 Ap '58. (MIRA 11:5)
(Shiraki Steppe—Potatoes—Varieties)
(Plants, Space arrangement of)

~~TER SA~~AKYAN, T.S.

Studying some biological characteristics of potatoes cultivated in
the Ararat Plain. Izv.AN Arm.SSR.Biol.nauki 15 no.9:63-67 S '62.
(MIRA 15:11)

(ARARAT REGION--POTATOES)

TERSAR, B.

Putting a new article into production of organized electric industry. p. 388.

ELEKTROTEHNISKI VESTNIK. ELECTROTECHNICAL REVIEW. Ljubljana, Yugoslavia.
Vol 26, no. 11/12, 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 6, June 1959.

Uncl.

ALIYEV, Vagab Safarovich; AL'TMAN, Natal'ya Borisovna; TER-SARKISOV,
Ben'yamin Georgiyevich; NAGIYEV, M.F., akademik, red.;
BAGDATLISHVILI, D., red. izd-va; POGOSOV, V., tekhn. red.

[Research in the field of catalytic and thermalcontact refin-
ing of the heavy fraction of crude] Issledovaniia v oblasti
kataliticheskoi i termokontaktnoi pererabotki tiazhalogo
neftianogo syr'ia. Baku, Izd-vo Akad. nauk Azerbaidzhanskoi
SSR, 1961. 282 p. (MIRA 15:4)

(Petroleum--Refining)

ALIYEV, V.S.; KASIMOVA, A.P.; TER-SARKISOV, B.G.

Method of determining the activity of K-5 finely divided
catalysts. Azerb. neft. khoz. 40 no.9:33-35 S '61. (MIRA 15:1)
(Catalysts)

ALIYEV, V.S.; YEFIMOVA, S.A.; KASIMOVA, A.P.; TER-SARKISOV, 3.G.

Evaluation of the activity of catalysts used in industrial processes with a circulating powdered catalyst. Kin.1 kat. 3 no.4:
545-549 J1-Ag '62. (MIRA 15:8)

1. Institut neftekhimicheskikh protsessov AN Azerbaydzhanskoy SSR.
(Catalysts)

ALIYEV, V.S.; ALIYEV, Z.E.; KASIMOVA, A.P.; KAPLANOVA, V.D.;
MURAVCHIK, M.Ye.; TER-SARKISOV, B.G.

Preliminary preparation of the dehydrating K-5 catalyst before
its introduction into the reactor. Azerb.neft.khoz. 41 no.8:
35-39 Ag '62. (MIRA 16:1)

(Catalysts)

13

TER-SARKISOV, G.G.

OK

The problem of the utilization of intestinal mucus. 1. A. Semrodintsev and G. G. Ter-Sarkisov. *Compt. rend. acad. sci. U. R. S. S.* 40, 201-3 (1943) (in English). -- Intestinal mucus contains 10-20% as much trypsin (1) as the pancreas. The use of this mucus for manufg. leather softeners and other products contg. I is proposed. Residues left after extg. I could be used in metal treatment and in combined food. J. W. Perry

Moscow Chem-Tech. Inst. Meat Industry

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

TER-SARKISOV, R., khudozhnik-konstruktor

Industrial interior decoration. Tekh. est. 2 no.7:16-17 J1 '65.
(MIRA 18:8)

1. Spetsial'noye khudozhestvenno-konstruktorskoye byuro Lenin-
gradskogo soveta narodnogo khozyaystva.

L 46120-66 EWT(1)/EEC(k)-2/T IJP(c)

SOURCE CODE: UR/0251/66/042/003/0547/0550

ACC NR: AP6024547

AUTHOR: Gogava, L. A.; Nakashidze, G. A.; Delerzon, N. M.; Dzhaparidze, Ye. G.;
Kakhbrishvili, I. V.; Ter-Sarkisova, A. G.

ORG: Academy of Sciences, Georgian SSR, Institute of Cybernetics (Akademiya nauk
Gruzinskoy SSR, Institut kibernetiki)

TITLE: Photoelectric characteristics of a two-terminal p-n-p-n type transistor switch

SOURCE: AN GruzSSR. Soobshcheniya, v. 42, no. 3, 1966, 547-550

TOPIC TAGS: electronic switch, germanium transistor, photosensitivity, volt ampere
characteristic, *pn junction, photoelectric property*

ABSTRACT: The article deals with the method of fabrication and photoelectric characteristics of germanium-base p-n-p-n type transistor switches. The starting material was a p-type wafer with a resistivity of 5 ohms·cm and dimensions of 1.3x1.3x0.08 mm. Two p-n junctions were obtained by diffusing antimony into both surfaces of the original wafer and the third, by alloying indium into one of the diffused layers. Ohmic contact on the opposite side was accomplished by doping with tin (Fig. 1). In the presence of a fixed bias lower than the switching

Card 1/3

L 4612C-66

ACC NR: AP6024547

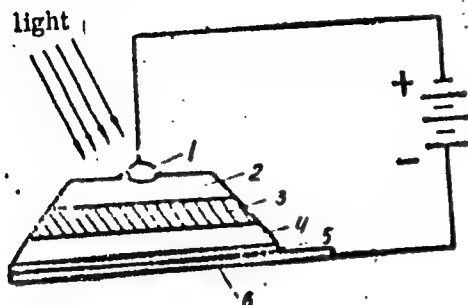


Fig. 1. Structure of two-terminal p-n-p-n type switch:

1 - rectifying nickel contact; 2, 4 - diffused n-layers; 3 - original p-type germanium; 5 - ohmic contact (tin); 6 - nickel holder

voltage the device is in the "off" state (point A on V-I characteristic in Fig. 2) and displays a high resistance of the order of several megohms. On illumination the switch changes from "off" state to "on" state (point B in Fig. 2) considering that the fixed bias voltage is then sufficient for breakdown of the center p-n junction. In this position the resistance of the device is of the order of several ohms. An investigation of V-I characteristics in the presence of darkness and various degrees of illumination conclusively proved that switching voltage decreases with increasing illumination. The minimum illumination required to switch the device is of the order of 100-150 lux. Further improvements in the design and fabrication of transistor switches should make it possible to develop more photosensitive and stable devices

Card 2/3

L 40120-00

ACC NR: AP6024547

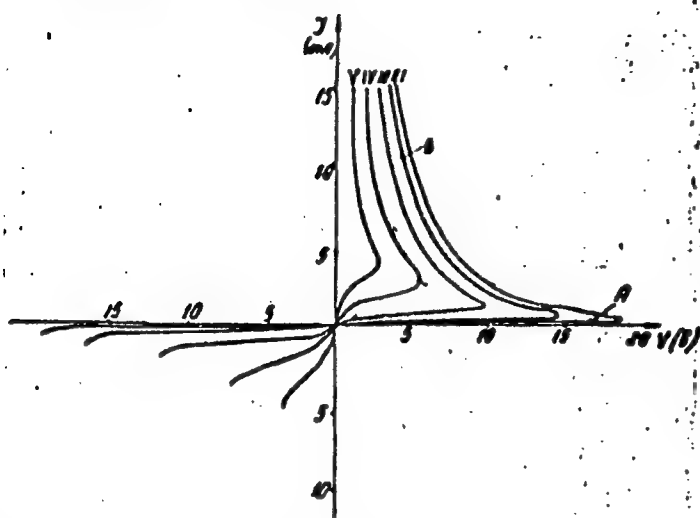


Fig. 2. V-I characteristic of p-n-p-n switch in the presence of varying degrees of illumination:

I - darkness; II - illumination of 460 lux; III - 920 lux; IV - 1840 lux; V - 2760 lux; VI - 5060 lux

of this kind with a switching time of less than 10^{-6} sec. Orig. art. has: 5 figures and 1 table,

SUB CODE: 09,20/

SUBM DATE: 25Jun65/

ORIG REF: 002/

OTH REF: 001

Card

3/3

LC

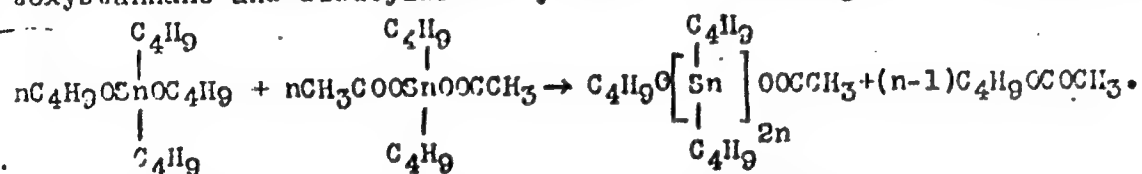
S/079/62/032/009/011/011
I048/I242

AUTHORS: Zhivukhin, S.M., Dudikova, E.D., and Ter-Sarkisyan, E.M.

TITLE: Synthesis and investigation of organostannoxanes. II

PERIODICAL: Zhurnal obshchey khimii, v.32, no.9, 1962, 3059-3061

TEXT: The first paper on this subject appeared in this publication, v. 31, 1961, 3106. This paper reports the results of an attempt to prepare polyorganostannoxanes by polycondensation of dibutyldiacetoxystannane and dibutyldibutoxystannane according to the equation



The experiments were carried out in an inert gas stream with constant stirring at 150 to 200°C. The starting materials were syn-

Card 1/2

S/070/62/032/000/011/011
I048/I242

Synthesis and investigation...

thesized in the laboratory. Both the rate of condensation and the final yield of butyl acetate increased, while the molecular weight of the polymer decreased with increasing reaction temperature. Thus, at 150°C the reaction was completed within 2 hrs, the yield of butyl acetate was 61.4%, and the molecular weight of the polymer was 1290 when the reaction was carried out under atmospheric pressure and 2400 in vacuo. At 180°C the reaction was completed within 1.5 hrs, the yield of butyl acetate was about 75%, and the molecular weight of the polymer was 840 under atmospheric pressure and 1610 in vacuo. The product formed at temperatures above 200°C contained a non-melting, insoluble phase whose structure needs further clarification. The polymer formed at 180°C was a brittle substance, easily soluble in benzene and its homologs, with a softening temperature of 130-140°C. The polymer formed at 150°C was a glass-like, brittle and transparent substance with good adhesion to metals and glass; its m.p. was 96-100°, and it did not lose its melting characteristics on repeated melting-solidification cycles. There are 2 figures.

SUBMITTED: September 13, 1961
Card 2/2

TER-SARKISYAN, G. S.

USSR/Chemistry - Acridine Derivatives Sep/Oct 51

"Condensation Reactions of Benzo-Derivatives of 9-Methylacridine. Communication 1. Conversion of 9-Methyl-3,4-Benzocacridine," A. Ye. Porey-Koshits (Deceased), G. S. Ter-Sarkisyan, Inst of Org Chem, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 5, pp 601-609

Synthesized series of new derivatives of 9-methyl-3,4-benzocacridine (I). Found that introduction of benzene ring into 3, 4-position of 9-

195T21

USSR/Chemistry - Acridine Derivatives (Contd) Sep/Oct 51

methylacridine mol, contrary to expectations, lowers capacity of M₂ group to react in condensations with aromatic aldehydes, p-nitrosodimethylamline, and azo compds. In these reactions quaternary salts of I exhibit much greater mobility of H atoms in Me group than free base. Azo dyestuff prepd by reacting I with p-nitrosodiazobenzene is identical with p-nitrophenylhydrazone of 9-methyl-3, 4-benzocacridyl aldehyde.

195T21

PA 195T21

TER-SARKISYAN, G. S.

Nov/Dec 51

USSR/Chemistry - Acridine Derivatives

"Condensation of Benzoderivatives of 9-Methylacridine. II. Transformations of 9-Methyl-1,2-Benzacridine (I) and 9-Methyl-3,4,5,6-Dibenzoacridine (II)," A. Ye. Poray-Koshits (Deceased), G. S. Ter-Sarkisyan, Inst Org Chem, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 6, pp 771-776

Introduction of a condensed benzene nucleus into 9-methylacridine lowers the reactivity of the methyl group in condensations with aromatic aldehydes, nitroso compds, and diazo compds. New de-

PA 197TL3

TRR-SARKISYAN, G. S.

TRR-SARKISYAN, G. S. -- "Condensation Reactions of Benzolates (Gasoline or Benzene Analogs) of 4-Methyl-Pyridine." Sub 26 Dec 52, Inst of Organic Chemistry, Acad Sci USSR. (Dissertation for the Degree of Candidate in Chemical Sciences).

SO: Vechernaya Moskva January-December 1952

USSR/ Chemistry Organic chemistry

Card 1 1/1 Pub. 40 - 12/27

Authors : Mikhaylov, B. M., and Ter-Sarkisyan, G. S.

Title Condensation reactions of benzaldehydes with dimethylacetamide. Part I. Condensation with 1,2-dithiol and dimethylacetamide

Periodical : Izv. AN SSSR. Otd. khim. nauk 4, 656 - 662, July - August 1954

Abstract The compensation of carbonylative, tetra-1, -benzoxoline

ring in the molecule. The effect of ultraviolet rays, in the case of condensation reaction, is explained. It was found that 9-methylacridine condenses easily with p-nitrosodimethylaniline in darkness, at room temperature, to form a dark brown product. The product is a

Institution : Acad. of Sc. USSR, The V. I. Zelinskiy Institute of Organic Chemistry

Submitted : June 23, 1953

TER-SARKISYAN, G. S.

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 901

Author: Mikhaylov, B. M., and Ter-Sarkisyan, G. S.

Institution: Academy of Sciences USSR

Title: Relative Reactivity of the Methyl Group in the Benzene Homologs of 4-Methylpyridine

Original
Periodical: Izv. AN SSSR, Section on Chemical Sciences, 1954, No 5, 846-853

Abstract: The reactivity of the CH_3 -group in picoline (I), lepidine (II), 5,6-benzolepidine (III), 7,8-benzolepidine (IV), 9-methylacridine (V), 9-methyl-1,2-benzacridine (VI), 9-methyl-3,4-benzacridine (VII), 9-methyl-1,2,7,8-dibenzacridine (VIII), and 9-methyl-3,4,5,6-dibenzacridine (IX) has been studied in the condensation with $m\text{-NO}_2\text{C}_6\text{H}_4\text{CHO}$ (X). It has been established that the reactivity of the investigated compounds in the reaction is expressed by the series $\text{I} > \text{II} > \text{II} > \text{IV}$ and $\text{V} > \text{VI} > \text{VII} > \text{VIII} > \text{IX}$ and, as a result, that the mobility of the hydrogen of the CH_3 -group in the benzene homologs of I depends

Card 1/3

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 901

Abstract: both on the number and on the position of the benzene nuclei condensed with the pyridine molecule. A mixture of 0.19 mole of β,β -dinaphtylamine, 0.19 mole $(CH_3CO)_2O$ (XI), and 26 gms anhydrous $ZnCl_2$ is heated for 5 hours at $185-190^\circ$. The CH_3COOH is distilled off and the residue heated 30 minutes at $250-260^\circ$, followed by repeated treatment with 10% H_2SO_4 and neutralization with 25% NH_4OH ; VIII is obtained in yields of 46.8% (crude), mp $180-183^\circ$ (successive crystallization from benzene, ethylacetate, and alcohol). Chromatographic purification of crude VIII yields an isomer with mp $215-216^\circ$. A mixture of 2.7 moles of II, and 5 ml of XI is heated in a sealed tube for 1.5 hours at $150-153^\circ$; the contents of the tube are dissolved in 20 ml C_6H_6 . The solution is treated with 30 ml 6 N HCl; 4-(m-nitrostyryl)-pyridine is obtained by the neutralization of the HCl-solution (yield, 48.2%); the unreacted II is recovered as the semicarbazone after extraction with benzene (yield 47.85%, based on II charged). Similar procedures were used in the condensation of the above-named benzene homologs of I with X and of II with $o-NO_2C_6H_4CHO$. A mixture of 2.2 moles of the hydrochloride of III, 2.2 moles of X, and 1.5 mole of XI is refluxed 3 hours; 10 ml of water are added after cooling and the solution is

Card 2/3

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 901

Abstract: made alkaline with 25% NH_4OH . The precipitate is washed twice with 3-ml portions of alcohol; the yield of m-nitro-benzylidene-5,6-benzolepidine is 30%, mp 168-169° (from alcohol). Similar methods were used in the synthesis of n-dimethyl-aminobenzylidene-5,6-benzolepidene in yields of 26.9%, mp 170.5-171.5° (from alcohol); m-nitrobenzylidene-7,8-benzolepidine in yields of 21.8%, mp 155-157° (successive crystallization from methyl and ethyl alcohol); and 9-(n-dimethylaminostyryl)-2-methylacridine in yields of 94% (crude), mp 225-226° (successive crystallization from CH_3OH and a mixture of benzene and petroleum ether). Condensation of V and X under UV-irradiation yields α -(m-nitrophenyl)- β -(9-acrydil)-ethanol (XII): a mixture of 7 mmoles of V, 7 mmoles of X, and 14 ml of C_6H_6 is irradiated with UV light for 100 hours in a N_2 -atmosphere; the yield of XII is 54%, mp 146.5-147.5° (successive crystallization from benzene and dioxane). Similar methods were used in the condensation of X with II, III, and VI.

Card 3/3

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"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755420012-4

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755420012-4"

5 (3)

AUTHORS:

TITLE:

Khaylov, B.M., Ter-Sarkisyan, G.S., Tatarsky, E.B. SOV/62-59-5-11/10
Polyene Compounds (Poliyenovyye soyedineniya). Communication
A. Synthesis of Arylpolyene Hydrocarbons by Means of
Organometallic Compounds (Soobshcheniya 1. Sintez
arilpoliyenovykh uglevodorodov pri pomoshchi metalloorganicheskikh
soyedineniy)

PERIODICAL:

ABSTRACT:

Investiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1959, Nr 5, pp 831-838 (USSR)
In this work which is the continuation of previous
communications (Refs 1, 2) some reactions between unsaturated
aldehydes and ketones and organometallic compounds are
investigated: benzyl sodium with the compounds benzyl aldehyde,
cinnamic aldehyde, α -methylcinnamic aldehyde, cinnamylidene
acetone, and cinnamylidene acetophenone, and 1-methyl-6-
phenylhexadiene-3,5-on-2. Special attention was given to the
investigation of the synthesis of 1,4- and 1,6-aryl-
substituted butadiene and hexatriene. Phenylbenzylcarbinol
was synthesized according to the Hobbie and Macrae method
(Ref 11). The experimental part shows a description of the
synthesis of the individual substances. The reaction scheme

Card 1/3

APPROVED FOR RELEASE: 07/16/2001

Polyene Compounds. Communication 4. Synthesis of Arylpolyene Hydrocarbons by Means of Organometallic Compounds SCV/62-59-3-11/40

for the preparation of the individual compounds are given. In the synthesis benzyl sodium was attached to cinnamic aldehyde in 1,2-position and methylcinnamic aldehyde as well as to an unsaturated ketone which has a methyl group in addition to the carbonyl group. The attachment of benzyl sodium to cinnamic aldehyde took place in the position 1,4 whereas the same ketone reacted with α -picolyl lithium in 1,2-position. Phenyl lithium reacted with benzaldehyde and cinnamylidene acetone with the formation of carbinols; in connection with the hydrogenation of the latter, dimers of the corresponding hydrocarbons were formed. Moreover, new forms of polyenes, e.g. the compound (XVIII) were obtained. The following compounds had been synthesized earlier: (VI) by Bower (Ref 4), (IX) by Koler (Ref 5), (dimerization of butadiene known in literature (Refs 6, 7), Whitby (Ref 8)), (XIX) by refs 9, 10. There are 11 references, 3 of which are Soviet.

Card 2/3

Polyene Compounds. Communication 4. Synthesis of Arylpolyene Hydrocarbons by Means of Organometallic Compounds SOV/62-59-5-11/40

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: July 19, 1957

Card 3/5

SOV/51-6-3-12/28

AUTHORS: Nikitina, A.N., Galanin, M.D., Ter-Sarkisyan, G.S., and Mikhaylov, B.M.

TITLE: The Absorption and Luminescence Spectra of Solutions of Substituted Polyenes (Spektry pogloshcheniya i lyuminestsentsiya rastvorov nekotorykh zameshchennykh poliyenov)

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 3, pp 354-365, (USSR)

ABSTRACT: The authors investigated the electronic absorption spectra of eighteen substituted butadienes and hexatrienes dissolved in heptane as well as luminescence of solutions of these substances in heptane and benzene. All the substances studied were purified chromatographically using aluminium oxide. The absorption spectra of solutions were measured using a spectrophotometer SF-4. The luminescence spectra in the visible region were measured by means of a spectrometer consisting of a monochromator UM-2 and a photomultiplier FEU-19. The results obtained are shown in Table 1. This table includes calculated values of the oscillator strengths of long-wavelength electronic transitions and the

Card 1/2

SOV/51-6-3-12/28

The Absorption and Luminescence Spectra of Solutions of Substituted Polyenes

quantum yields of luminescence. The absorption spectra of solutions of the substituted butadienes and hexatrienes are shown in Figs.1-8. It was found that the absorption intensities and band positions depend on the degree of departure from coplanarity of conjugated double bonds. It was found also that the quantum yield of luminescence of some substances is higher in benzene solutions and in others it is higher in heptane solutions. Measurements of the excited-state lifetime showed that decrease of the quantum yield of 1,1,4,4-tetraphenyl-butadiene-1,3 in a benzene solution is due primarily to quenching of the second type, while changes of the excited-state lifetime of 1,6-diphenyl-hexatriene-1,3,5 cannot be explained by quenching (Table 2). There are 8 figures, 2 tables and 11 references, of which 2 are Soviet, 8 English and 1 German.

SUBMITTED: January 16, 1958

Card 2/2

L 21175-66 ENT(m)/EWP(j)/T LW/JW/JWD/RM
ACC NR: AP6009804

SOURCE CODE: UR/0062/66/000/002/0360/0380

AUTHOR: Mikhaylov, B. M.; Ter-Sarkisyan, G. S.

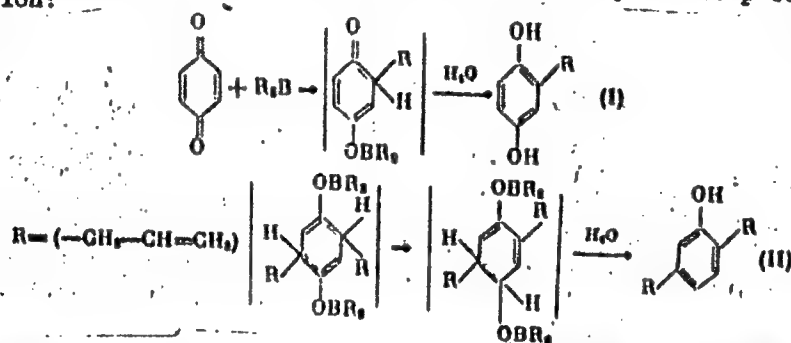
ORG: Institute of Organic Chemistry im. N. D. Zelinskiy, Academy of Sciences SSSR
(Institut organicheskoy khimii Akademii nauk SSSR)

TITLE: Reactions of boron allyl compounds with 1,4-benzoquinone¹

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 2, 1966, 380

TOPIC TAGS: benzoquinone, organoboron compound, allyl compound, chemical reaction

ABSTRACT: It was found that allyl compounds of boron readily add to p-benzoquinone in the 1,4-position:



Card 1/2

UDC: 547.244

L 21175-66

ACC NR: AP6009804

2

Dibutyl ester of allylboronic acid gives high yields of 2-allyl-1,4-hydroquinone(I) which otherwise is hard to obtain. ~~Butyl ester of diallylboronic acid~~ and triallylboron yield a mixture of (I) and 2,5-diallylphenol (II). The following data were determined for (II): bp = 114-115C (4.5 mm); $n_D^{20} = 1.5400$; and $d_4^{20} = 0.9966$. [EW]

SUB CODE: 07

SUBM DATE: 09Oct65/ OTH REF: 001/ ATD PRESS: 4/222

Card

2/2

BK

5(3)

AUTHORS:

Mikhaylov, B. M., Ter-Sarkisyan, G. S. SOV/79-29-5-50/75

TITLE:

Polyene Compounds (Poliyenovyye soyedineniya).
VII. Condensation of Vinyl-Ethyl-Ether With the Acetals of
Aromatic Aldehydes and Ketones (Kondensatsiya viniletilovogo
efira s astetalyami aromaticeskikh al'degidov i ketonov)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 5, pp 1642-1648
(USSR)

ABSTRACT:

As a first example in the series of aliphatic-aromatic ketones the authors investigated the reaction between diethyl ketal of acetophenone and the vinyl-ethyl-ether. This reaction is much more complicated than the one between acetals of aromatic aldehydes and α, β -unsaturated ethers. The following was isolated from the mixture: 3-phenyl-1,1,3-triethoxy butane, 5-phenyl-1,1,5-triethoxy hexene-2, 7-phenyl-1,1,7-triethoxy octadiene-2,4, 9-phenyl-1,1,9-triethoxy-decatriene-2,4,6 and diethyl acetal of acetal aldehyde. The structure of 3-phenyl-1,1,3-triethoxy butane was proven by saponification with diluted hydrochloric acid to 3-phenyl-3-ethoxy-butanal-1 and,, under heavier conditions, to β -methyl cinnamaldehyde.

Card 1/2

Polyene Compounds. VII. Condensation of Vinyl-Ethyl-
Ether With the Acetals of Aromatic Aldehydes and Ketones

SOV/79-29-5-50/75

In order to determine the position of the ethoxy group in 5-phenyl-1,1,5-triethoxy hexene-2, the diethyl acetal of β -methyl cinnamaldehyde was entered into reaction with vinyl ethyl ether and 5-phenyl-1,1,3-triethoxy hexene-4 was obtained therefrom. Both hexene derivatives (hexene-2, hexene-4) were hydrolyzed and the aldehyde obtained was identified by its 2,4-dinitrophenyl hydrazone. Moreover, hexene-2-derivative was obtained by direct synthesis from acetophenone acetal and 1-ethoxy butadiene-1,3. Both higher condensation products were not investigated more closely. The experimental describes the reactions carried out and gives the physical and analytical data of the initial substances as well as of the compounds obtained. There are 8 references, 1 of which is Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry of the Academy of Sciences of the USSR)

SUBMITTED: April 15, 1958

Card 2/2

SOV/79-29-8-22/81

5(3)

AUTHORS:

Mikhaylov, B. M., Ter-Sarkisyan, G. S.

TITLE:

Polyene Compounds. IX. Condensation of Acetals of Furyl-, Cinnamic- and Furyl-acrylic Aldehyde With Unsaturated Ethers

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2560-2565 (USSR)

ABSTRACT:

In addition to previous papers (Refs 1,2), the present paper deals with the condensation of the diethyl acetals of the above-mentioned aldehydes with the vinyl ethyl ether and 1-ethoxybutadiene-1,3. The reaction of these diethyl acetals with α,β -unsaturated ethers takes place readily in the presence of the acetic acid solution of zinc chloride, and yields the corresponding ethoxy derivatives of the aromatic and furane series which, by boiling with acetic acid (Ref 3), are easily transformed into the unsaturated aldehydes. The reactions of the diethyl acetals of the above-mentioned aldehydes with vinyl ethyl ether gave, in fair yields, the condensation products of acetal, mostly with one molecule of vinyl ethyl ether already at equimolar ratios of the reagents. Thus, the diethyl acetal of the cinnamic aldehyde reacts with this ether under formation of

Card 1/3

SOV/79-29-8-22/81

Polyene Compounds. IX. Condensation of Acetals of Furyl, Cinnamic- and Furyl-acrylic Aldehyde With Unsaturated Ethers

compound (I) which is transformed, by boiling with glacial acetic acid, to give (II) in good yield. This method is of preparative importance, and better than the previous condensation according to reference 4 (Scheme 1). Compound (III) can be obtained as easily, which is transformed by boiling with acetic acid into the acrolein (IV) which had formerly been synthesized from furfurole and acetic anhydride (Ref 5) (Scheme 2). The reaction of compound (V) with vinyl ethyl ether gives (VI), and further, with acetic acid, pentadienal (VII) (Scheme 3). On reaction of the double quantity of diethyl acetal of the cinnamic aldehyde with 1-ethoxy-butadiene-1,3, compound (VIII) resulted which further gives compound (IX) by boiling with acetic acid (Scheme 4). Further compounds of this kind (X)-(XIII) were synthesized for the first time (Schemes 5,6,7). There are 7 references, 2 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry of the Academy of Sciences, USSR)

Card 2/3

S/062/60/000/007/013/017/XX
B004/B064

AUTHORS: Mikhaylov, B. M., and Ter-Sarkisyan, G. S.

TITLE: Polyene Compounds. Communication 11. Asymmetrical
1,6-Diaryl-substituted Hexatrienes-1,3,5

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh
nauk, 1960, No. 7, pp. 1267 - 1271

TEXT: In a previous paper, the authors have described a simple
method of synthesizing 5-phenyl pentadien-2,4-al-1 from the diacetal
of cinnamic acid and vinyl ethyl ether. Thus, this aldehyde became
easily accessible to various syntheses, especially to the synthesis
of asymmetrical 1,6-disubstituted hexatriene-1,3,5 derivatives. In
the present paper, the authors report on the syntheses carried out
with 5-phenyl pentadien-2,4-al-1. 1) 1,6-diphenyl hexatriene-1,3,5 (A)
a) by means of the Grignard reagent obtained from magnesium and
benzyl chloride. The reaction is carried out in absolute ether
(yield: 26.5%); b) with benzyl sodium in toluene (yield: 31.5%);

Card 1/3

Polyene Compounds. Communication 11.
Asymmetrical 1,6-Diaryl-substituted
Hexatrienes-1,3,5

S/062/60/000/007/013/017/XX
B004/B064

c) with phenyl acetic acid in acetanhydride in the presence of litharge and boiling in nitrogen atmosphere, yield: 34.5%. 2) 1-phenyl-6-(α -naphthyl)-hexatriene-1,3,5 (B) with α -naphthyl acetic acid in acetaldehyde and in the presence of litharge, yield: 20.4%. Contrary to A, this compound luminesces strongly both in crystallized and dissolved state. 3) 1-phenyl-6-(9-phenanthryl)-hexatriene-1,3,5 (C) by means of the Grignard reagent from Mg and 9-chloro methyl phenanthrene in ether. This compound luminesces. 4) 1-phenyl-5-hydroxy-6-(p-biphenyl)-hexadiene-1,3 (D) by means of the Grignard reagent from Mg and 4-phenyl benzyl chloride in absolute ether. 5) 1-phenyl-6-(p-biphenyl)-hexatriene-1,3,5 (E) by boiling of D in glacial acetic acid. 6) 1-phenyl-6-(2-pyridyl)-hexatriene-1,3,5 (F) with α -picolyl-lithium in absolute ether. 7) 1-phenyl-5-hydroxy-6-(2-quinolyl)-hexadiene-2,4 (G) with quinaldyl-lithium in ether. 8) 1-phenyl-6-(2-quinolyl)-hexatriene-1,3,5 (H) by boiling of G in acetic acid. The introduction of heterocyclic substituents (E and G) leads to a weaker luminescence. In a later paper the authors will report on the optical properties of these compounds.

Card 2/3

Polyene Compounds. Communication 1;
Asymmetrical 1,6-Diaryl-substituted
Hexatrienes-1,3,5

S/062/60/000/007/013/017/XX
B004/B064

There are 5 references: 3 Soviet, 1 US, and 1 Swiss.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo
Akademii nauk SSSR
(Institute of Organic Chemistry imeni N. D. Zelinskiy
of the Academy of Sciences USSR)

SUBMITTED: December 27, 1958

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Card 3/3

86718

S/062/60/000/010/029/031/XX
B004/B060

406

2209, 1153, 1520

AUTHORS: Mikhaylov, B. M. and Ter-Sarkisyan, G. S.

TITLE: Synthesis of Mercaptals

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1960, No. 10, pp. 1886-1887

TEXT: The recently much investigated reaction of aldehyde acetals with vinyl ethers meets with difficulties in some cases, because of the complicated character of synthesis of corresponding acetals. In the study under consideration the authors intended to simplify their task by using easily obtainable mercaptals, $RCH(SC_2H_5)_2$, instead of acetals. The following reaction is described: A mixture of ethyl mercaptan with $ZnCl_2$ and Na_2SO_4 is cooled down to $-2^\circ C$, and aldehyde is added dropwise. The temperature must not exceed $0^\circ C$. After being allowed to stand in a refrigerator for 2-3 h, the mixture is poured into ice water, the separating oil is extracted with ether, washed with 10% lye, and subsequently with water, dried over Na_2SO_4 , and distilled in vacuum. Under these mild conditions, diethyl
Card 1/2

Synthesis of Mercaptals

86718

S/062/60/000/010/029/031/XX
B004/B060

mercaptals of cinnamaldehyde, 5-phenyl pentadien-2,4-al, citral, β -cyclo-citral, benzaldehyde, and furfurole were obtained in good yields (55.1-77.5%). A report is to follow concerning the condensation of these mercaptals with α,β -unsaturated ethers. L. S. Povarov is mentioned. There are 1 table and 10 references: 5 Soviet, 2 US, 1 Japanese, and 2 Swiss.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR
(Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: March 21, 1960

Card 2/2

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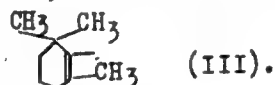
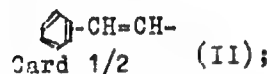
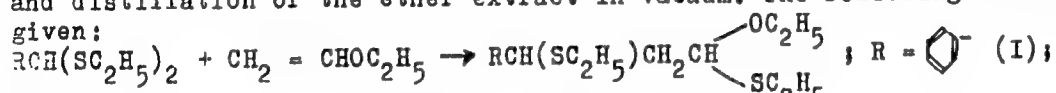
S/062/60/000/010/030/031/XX
B004/B060

AUTHORS: Mikhaylov, B. M. and Ter-Sarkisyan, G. S.

TITLE: Condensation of Mercaptals With Vinyl Ethyl Ether

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1960, No. 10, pp. 1888-1891

TEXT: In a previous paper (Ref. 2), the authors synthesized diethyl mer-
captals of benzaldehyde, cinnamaldehyde, and β -cyclocitral. The article under
consideration deals with the condensation of these compounds with vinyl
ethyl ether. The reaction took place with mercaptal in the presence of BF_3
etherate or ZnCl_2 solution in ethyl acetate as a catalyst, addition by
drops of vinyl ether without allowing temperature to rise, mixing with ether,
and distillation of the ether extract in vacuum. The following scheme is
given:



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Condensation of Mercaptals With Vinyl Ethyl Ether S/062/60/000/010/030/031/XX
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The presence of the mercaptal group was proved by a sublimate (Ref. 5). Boiling with glacial acetic acid effects the conversion of synthesized compounds into unsaturated aldehydes. Cinnamaldehyde was obtained from 1-ethoxy-1,3-di-(ethyl mercapto)-3-phenyl propane (I), while 5-phenyl pentadien-2,4-al was obtained from 1-ethoxy-1,3-di-(ethyl mercapto)-5-phenyl pentene-4 (II). Saponification of (I) in the presence of 2,4-dinitro phenyl hydrazone (2,4 DNPH) gave 2,4-DNPH of 3-phenyl-3-ethyl mercapto propanal, which, on boiling with alcoholic HCl, was converted into 2,4-DNPH of cinnamaldehyde. The ethyl mercapto group, not the ethoxy group, is separated on further reaction of (I) with vinyl ethyl ether to form 1,3-diethoxy-1,5-di-(ethyl mercapto)-5-phenyl pentane. The structure of this compound was proved a) by reaction with sublimate (proof of the mercapto group); b) reaction with 2,4-DNPH: formation of 2,4-DNPH of 5-phenyl-5-ethyl mercapto penten-2-al, which was converted into 2,4-DNPH of 5-phenyl pentadien-2,4-al. There are 1 table and 7 references: 5 Soviet, 1 US, and 1 French. X

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: March 23, 1960
Card 2/2

MIKHAYLOV, B.M.; TER-SARKISYAN, G.S.

Polyene compounds. Part 12: Condensation of 5-phenyl-2,4-pentadienal
with arylacetic acids. Zhur.ob.khim. 30 no.8:2521-2524 Ag '60.
(MIRA 13:8)

1. Institut organicheskoy khimii Akademii nauk SSSR.
(Acetic acid) (Pentadienal)

[illegible]

Cura

MIKHAYLOV, B.M.; TER-SARKISYAN, G.S.; BYSTROVA, A.A.

Polyenic compounds. Report No.16: Thioketals of unsaturated ketones
and their transformations. Izv.AN SSSR. Ser.khim. no.1:46-50 Ja
'64. (MIRA 17:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

REYTES, A.M.; FLORENSKIY, G.S.; MIKHAYLOV, B.M.; MINCHENSKIY, V.V.

Fluorescence of solution of substituted polyenes. Acta
physica Pol 26 no.3/4:483-487 S-O '64.

1. Organic Chemistry Institute, Moscow.

MIKHAYLOV, B.M.; TER-SARKISYAN, G.S.; BYSTROVA, A.A.

Polyene compounds. Report No.17: Condensation of vinyl ethyl ether
with thio ketals. Izv. AN SSSR. Ser. khim, no.3:443-446 '65.

(MIRA 18:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

TER-SARKISYAN, G.S.; MIKHAYLOV, B.M.

Condensation of unsaturated thio ethers of the terpene series with
orthoformic ester. Izv. AN SSSR, Ser. khim. no.3:561-563 '65.
(MIRA 13:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

MIKHAYLOV, B.M.; TER-SARKISYAN, G.S.

Polyene compounds. Report No. 18: Conversions of ethylmercapto-substituted monothioacetals of α - and β -dihydroionylidenacetaldehydes. Izv. AN SSSR. Ser. khim. no.7:1197-1204 '65. (MIRA 18:7)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

TER-SARKISYAN, G.S.; MIKHAYLOV, B.M.

Reaction of

1-(2,6,6-trimethylcyclohexen-2-yl)-3-(ethylmercapto)1,3-butadiene

with thiacetals. Zhur. org. khim. 1 no.7:1239-1241 JI '65.

(MIRA 18:11)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.

MISHUKOVA, Ye.A.; TER-SARKISYAN, L.G.

Electrophoresis of sarcoplasmic proteins in the rabbit myocardium under normal conditions and in experimental diphtheria intoxication. Vop. med. khim. 9 no.2:204-206 Mr.-1p '63.

(MIR' 17:8)

1. Kafedra biokhimii zhivotnykh Moskovskogo gosudarstvennogo universiteta imeni Lomonosova.

COTREL, Y.; TERSEN, G.; MOREL, G.

Corrective fixation in scoliosis. Acta chir. orthop. traum. cech.
29 no.5:393-395 O '62.

(SCOLIOSIS)

(BONE TRANSPLANTATION)

TERSENOV, S.A.

Eigenvalues and eigenfunctions of vibrations in a cylindrical envelope. Soob. AN Gruz. SSR 15 no.9:575-581 '54.

(MIRA 8:9)

1. Akademiya nauk Gruzinskoy SSR, Tbilisskiy matematicheskiy institut im. A.M. Razmadze. Predstavleno deystvitel'nyy chlenom Akademii I.N. Vekua

(Elastic plates and shells) (Eigenfunctions)

124-57-2-2242

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 2, p 111 (USSR)

AUTHOR: Tersenov, S. A.

TITLE: The Asymptotic Behavior of Eigenvalues and Eigenfunctions of the Vibrations of Cylindrical Shells (Asimptoticheskoye povedeniye sobstvennykh znacheniy i sobstvennykh funktsiy kolebaniy tsilindricheskikh obolochek)

PERIODICAL: Soobshch. AN GruzSSR, 1955, Vol 16, Nr 1, pp 11-18

ABSTRACT: Utilizing Carleman's method, asymptotic formulas are derived for the eigenvalues and eigenfunctions of the system of equations for the stationary vibrations of a circular cylindrical shell

$$I^{\lambda} U = 0,$$

with the following boundary conditions:

$$u=0, \quad v=0, \quad w=0, \quad \frac{\partial w}{\partial \nu} = 0 \quad \text{at } L.$$

Here U is a vector function having u , v , and w as its components; L is the boundary of the region D of the median surface of the shell; ν is the normal to L ; I^{λ} is a matrix operation with

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124-57-2-2242

The Asymptotic Behavior of Eigenvalues and Eigenfunctions (cont.)

components ℓ_{ij} ; and λ is the frequency parameter. These equations take into account the moments of the inertia forces which usually are neglected. As is shown by the asymptotic formulas, the moments of the inertia forces affect the frequencies of the higher vibratory modes significantly. The author obtains the evaluation

$$\lim_{n \rightarrow \infty} \frac{n}{\lambda_n} = \left(\frac{2b+c}{4\pi b(b+c)} + \frac{1}{8\pi(b+c)} \right) I,$$

where I is the area of the region D , and b and c are constant quantities which depend on the Poisson ratio. The last term takes the moments of the inertia forces into account. According to the author, the difference $\lambda_n - \lambda_n$ (where λ_n is the value that obtains when the moment of the inertia forces is disregarded) for extremely high frequencies exceeds 10 percent of λ_n and ultimately attains values between 10 and 16 percent of λ_n .

1. Cylindrical shells--Mathematical analysis

O. D. Oniashvili

Card 2/2

TERSENOV, S.A.

20-4-10/60

AUTHOR: Tersenov, S.A.

TITLE: An Elliptical Type of Equation which Degenerates on the Boundary of the Domain (Ob odnom uravnenii ellipticheskogo tipa vyrozhdayushchetsya na granitse oblasti)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 115, Nr 4, pp. 670-673 (USSR)

ABSTRACT: The author investigates the equation $L(u) = Ju_{xx} + u_{yy} + au_x + bu_y + cu = 0$. In this connection the $a(x,y)$, $b(x,y)$ and $c(x,y)$ in any finite portion of the semiplane $y \geq 0$ are analytical functions of the independent variables x and y , and $c(x,y) \leq 0$ may apply. In the semiplane $y > 0$ the initially given equation is of an elliptical type and it degenerates at $y = 0$. The author here gives an in a certain sense constructive characteristic of the solutions of the above-mentioned equation near the boundary of the degeneration of the type and investigates the boundary conditions in a formulation suggested by A.V. Bitsadze. The author investigates the function $\omega(x,y) = \int_y^1 \exp \left[\int_t^1 a(x,r) r^{-1} dr \right] dt + C_0$. The constant

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20-4-10/60

An Elliptical Type of Equation which Degenerates on the Boundary of the Domain

C is selected so that $\omega > 0$ holds in the closed domain \bar{D} . The function $\omega(x,y)$ is an analytical function for the finite quantities x and $y > 0$. Two theorems are given and proved here: Theorem 1: For any continuous function $f(x,y)$ assumed on $\Gamma + AB$ exists a unique, two-fold-continuous, differentiable solution $u(x,y)$ of the initially given equation which satisfies the condition $\lim_{(x,y) \rightarrow 0} (u(x,y)/\omega(x,y)) = f$

$Q \in \Gamma + AB$. In this connection AB signifies a section of the axis Ox and Γ signifies a smooth open arc. Theorem 2: When $u(x,y)$ is a twofold continuous differentiable solution of the initially described equation in D , when the boundary values on the closed set \bar{G}_0 are continuous and when $\lim_{y \rightarrow 0} (u/\omega) = 0$

applies on G , such a solution is limited in \bar{D} . This solution is then in a unique manner defined by the assumption of continuous data on Γ and on those portions of the distance AB where $a(x,0) < 1$ applies. There are 2 Slavic references.

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An Elliptical Type of Equation which Degenerates on the Boundary of the Domain 20-4-10/60

ASSOCIATION: Tiflis Mathematical Institute AN Georgian SSR im.A.M.Ramadze
(Tbilisskiy matematicheskiy institut imeni A.M.Ramadze Akademi
demii nauk GruzSSR)
PRESENTED: March 8, 1957, by M.A. Lavrentiyev, Academician
SUBMITTED: March 4, 1957
AVAILABLE: Library of Congress

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SOV/20-129-2-11, 66

16(1) 16.3500

AUTHOR: Tersenov, S.A.

TITLE: On a Hyperbolic Equation Degenerating on the Boundary

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 2, pp 276-279 (USSR)

ABSTRACT: Let

$$(1) \quad L(u) \equiv y^n u_{yy} - u_{xx} + au_y + bu_x + cu = f$$

be given, where a, b, c, f are analytic in x and $y \gg 0$.

$$(2) \quad x \pm \frac{2}{2-n} y^{1-n/2} = c$$

are the characteristics of (1). Let the domain D of the upper half plane be bounded by two characteristics, by the point (ξ_0, η_0) and by the interval AB of the x -axis, where A and B

are the points of intersection of the characteristics with the x -axis. Let $n=1$.

Theorem 1. α .) If $a(x, 0) < 1$ on AB , then there exists a single solution $u(x, y)$ of (1) in D satisfying the conditions

$$(3) \quad u(x, 0) = \tau(x), \quad \lim_{y \rightarrow 0} \frac{1}{\eta_y} [u_{y-\eta_y}] = \nu(x).$$

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